CONTENTS OF VOL. 47

Vol. 47(No.1) January - Feburary, 2004

ACKNOWLEDGEMENT i

PHYSICAL SCIENCES

Levels of total petroleum hydrocarbons (TPH) and heavy metals in shrimp waste meal supplemented broiler feeds and droppings
A.A.Adeniyi, O.O.Oduguwa, O.C.Asunumeh, Y.O.Ikekhua and A.O.Fabiyi (Nigeria) 1

Production of biogas at mesophilic and thermophilic temperatures
I.Ali, M.M. Ali, M.A.Basit and A.R.Khan (Pakistan) 5

A family of iteration formulas for the determination of the zeros of a polynomial
S.E.Uwamusi (Nigeria) 9

The effect of fresh and aged *Cassava* processing effluent on the physio - chemical properties of soil
J.E.Ebhoaye and J.O.Dada (Nigeria) 13

Geochemical and flotation studies of copper ore of North Wazirstan Agency
M.Riaz, V.Hussain, K.Faridullah, Mumtaz, N.Jan and K.Khan (Pakistan) 17

Synthesis and characterization of silyl - group - containing fluorenes
S.A.Khan and M.Faisal (Pakistan) 21

BIOLOGICAL SCIENCES

Biochemical changes in chickpea roots after inoculation with virulent and hypovirulent. Isolates of *Fusarium oxysporum* f. sp. *ciceris*
I.A.Khan, S.S.Alam and A.Jabbar (Pakistan) 25

Antibacterial activity of Pakistani *Rhazya stricta*
S.Ahmad, K.Fatima and Atiq-ur-Rahman (Pakistan) 29

Recycling of sugarcane industrial waste as a biofertilizer through composting
M.A.Arain and F.Qamar (Pakistan) 34

Trace elements in indigenous medicinal diuretic plants in human health and disease (*Cymbopogon citratus* (DC) Stapf., *Raphanus sativus* Linn. and *Zea mays* Linn.)
M.Mirza, Z.Yaqeen, A.Bano, R.B.Qadri and M.Qadiruddin (Pakistan) 42

Seed - borne Mycoflora of oats in the Punjab
A.H.Tariq, S.Ahmad, M.A.Hussain, L.H.Akhtar, M.Arshad and S.Z.Siddiqui (Pakistan) 46

Effects of nitrogen and copper fertilization on rice yield and fertilizer nitrogen efficiency: A ^{15}N tracer study
A.T.M.A Choudhury and Y.M.Khanif (Australia) 50

CONTENTS OF VOL. 47

Vol. 47(No.1) January - Feburary, 2004

ACKNOWLEDGEMENT i

PHYSICAL SCIENCES

Levels of total petroleum hydrocarbons (TPH) and heavy metals in shrimp waste meal supplemented broiler feeds and droppings
A.A.Adeniyi, O.O.Oduguwa, O.C.Asunumeh, Y.O.Ikekhua and A.O.Fabiyi (Nigeria) 1

Production of biogas at mesophilic and thermophilic temperatures
I.Ali, M.M. Ali, M.A.Basit and A.R.Khan (Pakistan) 5

A family of iteration formulas for the determination of the zeros of a polynomial
S.E.Uwamusi (Nigeria) 9

The effect of fresh and aged *Cassava* processing effluent on the physio - chemical properties of soil
J.E.Ebhoaye and J.O.Dada (Nigeria) 13

Geochemical and flotation studies of copper ore of North Wazirstan Agency
M.Riaz, V.Hussain, K.Faridullah, Mumtaz, N.Jan and K.Khan (Pakistan) 17

Synthesis and characterization of silyl - group - containing fluorenes
S.A.Khan and M.Faisal (Pakistan) 21

BIOLOGICAL SCIENCES

Biochemical changes in chickpea roots after inoculation with virulent and hypovirulent. Isolates of *Fusarium oxysporum* f. sp. *ciceris*
I.A.Khan, S.S.Alam and A.Jabbar (Pakistan) 25

Antibacterial activity of Pakistani *Rhazya stricta*
S.Ahmad, K.Fatima and Atiq-ur-Rahman (Pakistan) 29

Recycling of sugarcane industrial waste as a biofertilizer through composting
M.A.Arain and F.Qamar (Pakistan) 34

Trace elements in indigenous medicinal diuretic plants in human health and disease (*Cymbopogon citratus* (DC) Stapf., *Raphanus sativus* Linn. and *Zea mays* Linn.)
M.Mirza, Z.Yaqeen, A.Bano, R.B.Qadri and M.Qadiruddin (Pakistan) 42

Seed - borne Mycoflora of oats in the Punjab
A.H.Tariq, S.Ahmad, M.A.Hussain, L.H.Akhtar, M.Arshad and S.Z.Siddiqui (Pakistan) 46

Effects of nitrogen and copper fertilization on rice yield and fertilizer nitrogen efficiency: A ^{15}N tracer study
A.T.M.A Choudhury and Y.M.Khanif (Australia) 50

Integrated pest management of potato cutworm, *Agrotis ipsilon* (Hufnagel)
M.A.Mannan, M.A.Hossain, M.R.Ali and R.Tasmin (Bangladesh) 56

A study of the oil content of Nigerian grown *Monodora myristica* seeds for its nutritional and industrial applications
I.A.Ajayi, K.O.Adebowale, F.O.Dawodu and R.A.Oderinde (Nigeria) 60

SHORT COMMUNICATION

Physico - chemical characteristics of commonly consumed legumes after domestic processing
Z. Rehman, A.M.Salariya and S.Samreen (Pakistan) 66

Allelopathic effect of aqueous extracts of *Calotropis procera* on germination and seedling growth of maize
J.Kayode (Nigeria) 69

***In vitro* assessment of the probiotic properties of *Lactobacillus acidophilus* from faeces and fresh cow milk**
V.O.Oyetayo, F.C.Adetuyi and F.A.Akinyosoye (Nigeria) 73

REVIEW

Toxicity of dyes and dye intermediates
S.Waheed and G.R.Khan (Pakistan) 76

Vol. 47(No.2) March - April, 2004

ACKNOWLEDGEMENT

i

PHYSICAL SCIENCES

Studies on some electrical properties of polycrystalline calcium fluoride at high temperatures
S.S.Ahmad and S.W.A.Rizvi (Pakistan) 91

Studies of reaction mechanism and physical nature of light weight basic magnesium carbonate
A.Khalique, A.Akram, N.Hamid and I.H.Khan (Pakistan) 96

High field ^{13}C - NMR spectroscopic analysis of the triacylglycerols of *Adenopus breviflorus* seeds oil
E.T.Akintayo, C.O.Akintayo, I.Ogunlade and H.N.Ogungbenle (Nigeria) 99

SHORT COMMUNICATION

Electrolytic oxidation of tetrahydrocarbazole
Inam-ul-Haque (Pakistan) 104

BIOLOGICAL SCIENCES

Cultivation of prawn in polyculture with some species of Indian and Chinese major carps
M.Y.Mia (Bangladesh) 107

Artificial ground freezing method for shaft construction in Maddhapara hardrock mine, Bangladesh: minimization of its cost
C.S.Jahan, C.Quamruzzaman, Q.H.Mazumder and T.A.H.F.M.A. Haque (Bangladesh) 112

Natural protein fortification of cassava (*Manihot esculenta*, Crantz) products (flour & gari) using Baker's yeast solid media fermentation
G.Oboh and A.A.Akindahunsi (Nigeria) 118

Isolation, characterization and study of microbial activities of the brain lipid and chemical analysis of the brain of Baghda chingri (*Penaeus monodon*) of the Bay of Bengal
M.H.Uddin, M.A.Majid, A.C.Mistry and M.A.Manchur (Bangladesh) 121

Response of a cotton cultivar to sulphur fertilization
M.I.Makhdum and M.N.A.Malik (Pakistan) 126

Antiulcer effect of *Artemisia absinthium* L. in rats
N.Shafi, G.A.Khan and E.G.Ghauri (Pakistan) 130

An eco - friendly approach for the management of nematodes associated with chilli
A.Khan, F.Qamar, S.S.Shaukat and A.H.Jaffry (Pakistan) 135

Microbial side - chain degradation of progesterone II. Application of different techniques for progesterone conversion by *Fusarium dimerium*
N.Z.Adham, O.M.El-Tayeb, A.G.M.Hashem, H.El-Refai and L.A.Sallam (Egypt) 138

Constituents of *Prunus armeniaca*
R.Ahmed, F.Rashid, S.Mansoor and N.Ansar (Pakistan) 142

Effect of selected food additives on phytic acid content of soybean during soaking
M.Shahnawaz, A.Zeb and T.U.Khan (Pakistan) 146

Leaf modifications to quantify yield, earliness and fibre traits in *Gossypium hirsutum* L.
M.J.Baloch (Pakistan) 153

SHORT COMMUNICATIONS

Study of some kinetic parameters for citric acid biosynthesis by *Aspergillus niger* mutant NG - 110 using shake flask technique
R.Mazhar, A.Rehman, A.Sadiq, S.Ali, A.Waheed and I.Haq (Pakistan) 157

Phytochemical analyses and antimicrobial activities of the leaf and stem bark extracts of *Garcinia kola* - Herkel (Family Gultiferae)
I.F.Obuekwe and N.D.Onwukaeme (Nigeria) 160

TECHNOLOGY

Studies on sodium sulphide prepared from sodium sulphate
H.Masood and L.Khan (Pakistan) 163

Erratum 166

Vol. 47(No.3) May - June, 2004

ACKNOWLEDGEMENT i

PHYSICAL SCIENCES

Environmental problems and their control measures of a glass factory at Peshawar (Pakistan)
J. Shah, A.R. Khan, Amin-ur-Rahman and F. Khan (Pakistan) 167

Isolationh and pharmacological screening of 8-*O*-acetyl harpagide from *Ajuga bracteosa* Wall
N. Shafi, G.A. Khan, M Arfan, K. Ahmad and N.D. Gilani (Pakistan) 176

Electrical properties of annealed and unannealed Al-Ge thin film couples
S.S. Oluyamo (Nigeria) 180

Production of aluminium sulphate and utilization of clay residue from kaolinite clay
M. Akif and M. Zubair (Pakistan) 183

Analytics and kinetics of crystallization of magnesium sulphate from sea bittern, through supersaturation
F. Azmat, M. Adil, S.N. Mahmood and Nayeemuddin (Pakistan) 187

Petrography, trace element geochemistry and dolomitization model-Jhimpir, Sindh, Pakistan
S. Naseem, S.A. Sheikh, M. Qadeeruddin and K Shirin (Pakistan) 195

SHORT COMMUNICATION

Large ampltude pulsed voltammetry of 4-chloroaniline
Iman-ul-Haq (Pakistan) 205

Feasibility of redox reactions through formal redox potential values
M.A. Farrukh and I.I. Naqvi (Pakistan) 209

BIOLOGICAL SCIENCES

Proximate composition, minerals content and functional properties of cricket (*Acheta spp)*
F. O. Abulude (Nieria) 212

Single-dose pharmacokinetic study of ciprofloxacin after oral administration to the healthy female volunteers
F. Bashir, M. Nawaz, R. Nawaz and I. Ijaz (Pakistan) 214

Preparation and shelf life studies of *Eugenia jambolana* (jamun) leather
S.K. Fatima, Z. N. Umar and R. Zuberi (Pakistan) 218

Influence of plant water extracts on the germination and seedling growth of barnyard grass (*Echinochola crus-galli* (L.) Beauv
A. Irshad and Z.A.Cheema (Pakistan) 222

Eco-physiological and conservation studies on *Vernonia amyglina* in Ekiti state, Nigeria
J. Kayode (Nigeria)

Antimicrobial drug resistance evaluation and monitoring in *Escherichia coli* isolated from poultry environment at different time intervals
R. Anwar and M.A. Khan 231

Suitability of durum wheat varieties for the production of doughnuts
S. Rehman, M Azam, S. Hussain and N. Shahzadi (Pakistan) 237

TECHNOLOGY

Application of geographic information system (GIS) to solid mineral resource information management
Z.O. Opafunso and E.O. Ajaka (Nigeria) 240

Vol. 47(No.4) July - August, 2004

PHYSICAL SCIENCES

Simulation of cyclic voltammogram of ruthenocene
Inam-ul-Haq (Pakistan) 247

Drug release profile of malic acid-phthalic acid butane 1, 4-diol copolyester
M.A. Bakr, S. Khatun and M.A. Islam (Bangladesh) 251

Fused pyrimidines: *Part-I:* Synthesis of imidazo[1, 2-a]thieno[2, 3-d]pyrimidin-5*(1H)*- imine and pyrimido[1,2-a] thieno[2,3-d] pyrimidin-6-imine
M.M.H. Bhuiyan, K .M.M. Rahman, M.K. Hossain and M. Fakruddin (Bangladesh) 256

Quality of ice manufactured in Karachi city
S.N. Mahmood, T.H. Usmani, L. Sultana, I. Siddiqui and F.A. Khan (Pakistan) 259

Studies on the utilization of spent catalyst used in oil refinery
I.H. Khan, F. Mahmood, S. Zahra, F. Saleem and M. Naeem (Pakistan) 265

Synthesis of sinensetin, a naturally occurring polymethoxyflavone
M. A. Hossain and Z. Ismail (Malaysia) 268

SHORT COMMUNICATION

Ultrasonic propagation in aqueous solution of polyvinyl acetate in various concentrations at different temperatures
S.S. Ahmed, M. Yaqub, K. Ahmed and G.H. Shaikh (Pakistan) 272

BIOLOGICAL SCIENCES

Optimization of progesterone 11α-hydroxylation in the presence of β-cyclodextrin
I.S. Abdel-Salam (Egypt) 275

Integrated biological and chemical treatment of brewery sludge
I.O. Asia and C.M.A. Ademoroti (Nigeria) 281

Partial purification and characterization of glycolipid isolated from *Colletotrichum lindemuthianum*
F. Bi and P. Finch (Pakistan) 292

Influence of common purslane aqueous extracts on germination and seedling growth of rice
S.M. Alam, M.A. Khan and S.M. Mujtaba (Pakistan) 298

Lipid classes of *Hordeum vulgare*
S. Rehman, T.A. Chaudri and M.Z. Iqbal (Pakistan) 303

Dispersing and parasitizing ability in *Trichogramma chilonis* Ishii in early and late sown NIAB-86 cotton variety
M. Hamed, S. Nadeem and M.T. Siddiquee (Pakistan) 309

TECHNOLOGY

Reclamation of waste lubricating oils using ground periwinkle shell adsorbents
S.A. Osakwe and A.U.C. Maduako (Nigeria) 312

Monoculture of silver barb (*Barbodes gonionotus*) vs. mixed culture with GIFT (*Oreochromis niloticus*) in seasonal mini ponds under farming system in Bangladesh
M.M.R. Shah, M.Y. Mia and S. Rheman (Bangladesh) 316

Modification of rapid method for phytic acid determination in wheat and its production
A. Zeb, F. Mahmood, S. Muhammad, S.A. Shah, M.A. Chaudry and M.J. Qureshi (Pakistan) 322

Vol. 47(No.5) September - October, 2004

PHYSICAL SCIENCES

Kinetics of solvent extraction of zirconium (iv) from chloride medium by D2EPHA in kerosene using the Lewis cell technique: A comparison with single drop technique
R.K. Biswas, M. A. Habib and M.A. Hayat (Bangladesh) 325

Synthesis of 5, 7-dihydroxy-6, 8-di-C-prenyl-4-*O*-prenyl-flavanone
M. A. Hossain, Saravanand and Z. Ismail (Malaysia) 332

Effect of pH and concentration on the removal of magnesium from magnesium chloride solution by bentonite
R. Bibi, W.A. Shah and M. Iqbal Ch. (Pakistan) 336

Traffic noise in Lahore city, *Part I:* Road traffic noise
K. Islam, T. Ahmad and G.H. Shaikh (Pakistan) 340

Phytochemical analysis and laxative activity of the leaf extracts of *Euphorbia heterophylla* Linn (Euphorbiaceae)
A. Falodun and E.O.P. Agbakwuru (Nigeria) 345

Ultrasonic studies on some aqueous solutions of carbohydrates at three different temperatures
S. S. Ahmad, K.A. Nasir and R. Saleem (Pakistan) 349

SHORT COMMUNICATION

Pulse voltammetric determination of pK_a of para-chloroaniline
Inam-ul-Haque (Pakistan) 356

BIOLOGICAL SCIENCES

Comparative ecological study of phytoplankton. *Part II.* Bakar and Phoosna Lakes - Pakistan
M.K. Leghari, M.Y. Leghari, M. Shah and S.N. Arbani (Pakistan) 358

Assessment of drinking water quality of a coastal village of Karachi
F.R. Hasnie and N.A. Qureshi (Pakistan) 370

Some ecological studies on *Linum usitatissimum* Linn
N. Imtiaz, F.Hussain, G. Dastagir and K.M. Aslam (Pakistan) 376

Sera from Nigerian children with genitourinary schistosomiasis having immune complexes and heat labile leucocyte migration inhibitory factors without impaired cellular immunity
N.C.D. Ukwandu and O.P.G. Nmorsi (Nigeria) 380

Preliminary investigation on the herbicidal potentials of the extracts from maize inflorescence on seeds of three tropical compositae weeds
J. Kayode and P.O. Tedela (Nigeria) 387

Effect of aqueous extract of *Avicinnia marina* on myocardial contraction of isolated mammalian heart
S. Ahmed and A. Rahman (Pakistan) 390

Toxicity of *Clerodendrum inerme* extract and cyhalothrin against *Rhizopertha dominica* PARC strain and their effect on acid phosphatase and cholinesterase activity
M.A. Azmi (Pakistan) 394

Influence of different types of milk and stabilizers on sensory evaluation and whey separation of yoghurt
M. Ayub (Pakistan) 398

SHORT COMMUNICATION

Comparison of hyper producer *Aspergillus niger* cultures (IFS-5, IFS-6 and IFS-17) for citric acid fermentation in surface culture
I. Haq, S. Ali and M.A. Qadeer (Pakistan) 403

Vol. 47(No. 6) November - December, 2004

PHYSICAL SCIENCES

Spectroscopic and chemical evaluation of clay minerals and their suitability for the manufacturing of organic clay, medicinal clay and pillared clay
A. M. Ehsan, S. Hussain, S. Ehsan and M.S. Khan (Pakistan) 407

Palynostratigraphic studies of cretaceous deposits of anambra basin, Eastern Nigeria
O. F. Adebayo and A. O. Ojo (Nigeria) 417

Effect of mordants on color shade and color fastness of silk dyed with Kikar and Madder barks
S. Waheed and A. Alam (Pakistan) 423

Assessing the speciation pattern of lead and zinc in surface water collected from Abegede creek, Ijora and Lagos
A. A. Adeniyi and O. O. Okedeyi (Nigeria) 430

Adsorption of acridine orange on some metal oxides
A. Wadood, A. Quddos and J.A. Qaisrani (Pakistan) 435

BIOLOGICAL SCIENCES

Anatomical characteristics of rice plants influencing resistance and susceptibility to yellow stem borer
M. Shahjahan (Pakistan) 440

A new species of *Tylenchorhynchus* with comments on *Geocenamus rugosus* (Thorne and Malek 1968) Brezeski 1991 from Sindh
H.A. Khan, H.Saeed and M. Akhter (Pakistan) 446

Genetic variability and heritibility estimates of some polygenic traits in upland cotton
M.J. Baloch (Pakistan) 451

Two new *Caloglyphus* berlese mites (astigmata: acaridae) recorded in Pakistan
M. Sarwar and M. Ashfaq (Pakistan) 455

Skeletal anomalies in fishes collected from Korangi creek and backwater of Sandspit along the coast of Karachi
S.M. Hussain and Z. Khatoon (Pakistan) 462

Stability parameters of mung strains in Southern Punjab
L.H. Akhtar and M. Arshad (Pakistan) 467

TECHNOLOGY

Mineral components important for health from animal sources
E. I. Adeyeye and F. J. Faleye (Pakistan) 471

REVIEW

High temperature Si-B-C-N ceramics
S.A. Khan and M. Faisal (Pakistan) 478

Contents ii

Author Index xi

Subject Index xiv